

REMARKS**Summary of the Office Action**

Claims 21, 22, 29 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable Miyashita et al. (WO 02/19368) (hereinafter "Miyashita") in view of Smith (WO 01/31081) (hereinafter "Smith").

Claims 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyashita in view of Smith, and further in view of Applicant's admitted prior art.

Claims 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyashita in view of Smith as applied to claim 21, and further in view of Konishi (U.S. Patent No. 5,957,743) (hereinafter "Konishi").

Summary of the Response to the Office Action

Applicants have canceled claims 21, 22, 24-27 and 29, and have amended claim 30 to differently describe embodiments of the disclosure of the instant application's specification and/or to improve the form of the claims. Accordingly, claims 1-20 and 30 are currently pending with claim 30 currently under consideration.

Rejections under 35 U.S.C. 103(a)

Claims 21, 22, 29 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable Miyashita in view Smith. Claims 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyashita in view of Smith, and further in view of Applicant's admitted prior art. Claims 26 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over

Miyashita in view of Smith as applied to claim 21, and further in view of Konishi. In response, claims 21, 22, 24-27 and 29 are being canceled, and claim 30 is being amended as indicated above. Applicants submit the amendment to claim 30 described above is supported in view of Claim 2 which already recites "a maximum substrate among substrates being able to be fed by said feeder."

Applicants submit that the meaning of the angle between the first and second lines which is set in a range of 60-80 degrees is more clear as a result of the amendment to claim 30. More specifically, by the feature recited in the last paragraph of the amended claim 30 (that is, an angle between a first line connecting any one of said two evaporation sources and an edge point on a maximum display area among display areas of substrates being able to be fed, that is closest to said one evaporation source and a second line parallel to a surface of said display area and perpendicular to said first direction is equal to 60 degrees or greater than 60 degrees and less than 80 degrees, or equal to 80 degrees), a protection film having good characteristics can be formed, and the film forming apparatus is prevented from becoming excessively large in size. That is, the method of fabricating a plasma display panel according to the embodiments of the present invention can be used to solve the problem of degrading of the characteristics of the protection film of the plasma display panel that occurs at its edge portions in the width direction of the substrate even if the protection film is formed in such a way that its film thickness is made uniform in the width direction of the substrate.

Concerning the Smith patent relied upon by the Examiner that has a target to achieve an improved uniformity of the film, Applicants submit that the term "uniformity" apparently means "uniformity in thickness." However, characteristics of the film are not discussed at all in the

description and claims. Therefore, the applicants believe that Smith pertains to the prior art already discussed in the description of the present application.

That is, as pointed out by the Examiner, Smith discloses, as illustrated in Fig. 7, that a 15-inch length sidewall 18 is used as sidewalls of the trough crucible 12, for coating a 12-inch square substrate 24, in order to achieve an enhanced uniformity in thickness of the film of the substrate being formed (lines 18-22 of page 10). Uniformity in film thickness is achieved by the use of the sidewall 18 which extends over a longer length SL than the width W2 of the substrate 24. However, as the size of the PDP becomes large, a substrate having a display area of a size near to a limit of the fabricating apparatus is becoming used. This means that the evaporation source cannot be positioned with sufficient allowance as in the case of prior arrangements. In view of this, Applicants have realized, as a problem to be solved, that characteristics of the protection film are degraded at its edge portions in the width direction even if the protection film is formed in such a way that its film thickness is uniform in the width direction of the substrate.

With respect to the characteristics described above, the secondary electron emission characteristic and the resistivity against sputtering can be important. Applicants have also realized that these characteristics are good if crystals of the protection film are (111)-oriented.

Furthermore, Applicants have realized that the relative intensity of the orientation of (111) of the crystals of the protection film is increased by setting the angle between the first and second lines according to the embodiments of the present invention at an angle between 60-80 degrees, for a maximum display area among display areas of substrates to be inserted into the film forming apparatus. This increase in the relative intensity leads to the formation of a

protection film having good characteristics, and also is beneficial to prevent the film forming apparatus from becoming large in size.

In other words, although Smith may disclose that the angle between the first and second lines (defined in the present application) is set at around 80 degrees in order to achieve the uniformity in film thickness of the film through the sputtering, Applicants submit that a person skilled in the art would not realize that the angle between the first and second lines is set at an angle in a range of 60-80 degrees for a largest display areas among display areas of the substrates to be inserted into the film forming apparatus. Moreover, Applicants submit that Smith clearly fails to disclose a technical idea to improve characteristics, in particular, the secondary electron emitting characteristic and the sputtering resistivity, of the protection layer, by increasing the relative intensity of orientation of (111) of crystals of the protection film.

Miyashita, on the other hand, discloses that good characteristics can be obtained by forming a protection layer having (111) plane orientation in the direction of thickness of the protection layer (see paragraph 0188). However, as Smith fails to disclose or suggest the feature of increasing the relative intensity of the (111) orientation of the crystals, there can be no motivation to combine the disclosure of these prior art references.

Thus, Applicants submit that for at least the above reasons, one skilled in the art would not have found the claimed subject matter obvious in view of Miyashita and Smith. The "admitted prior art" and Konishi fail to make up for the deficiencies in the teachings of Miyashita and Smith. Hence, claim 30 should be allowable.

CONCLUSION

In view of the foregoing discussion, Applicants respectfully request the entry of the amendments to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution. A favorable action is awaited.

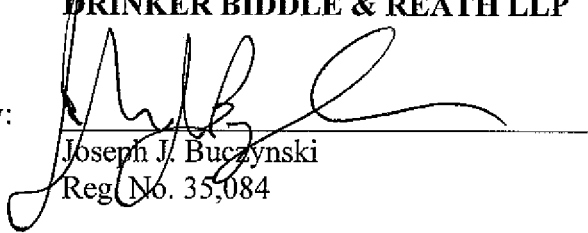
EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. § 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0573. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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Dated: October 16, 2008

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